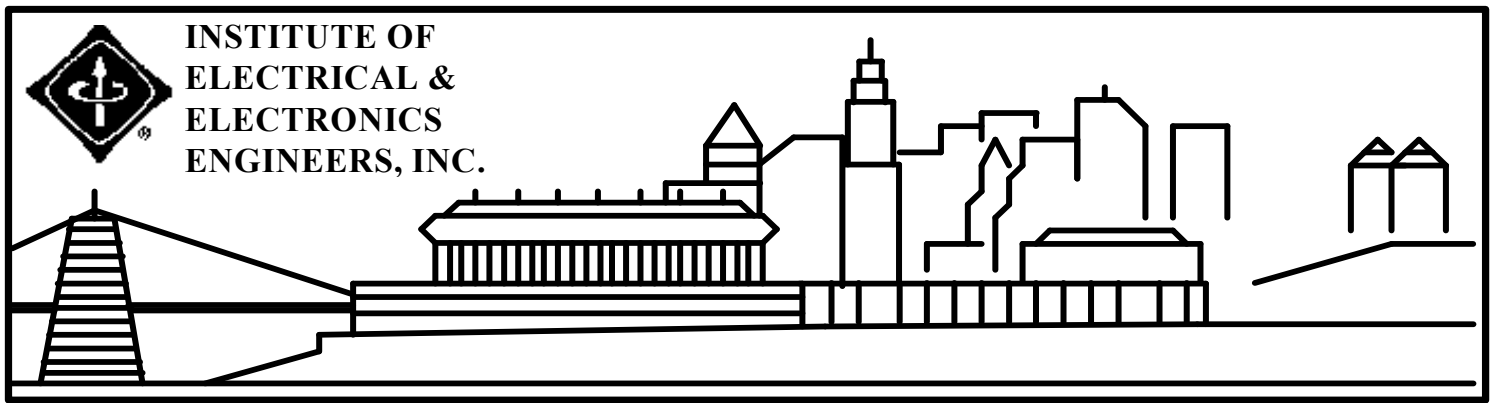




OCTOBER 1994

IEEE CINCINNATI SECTION NEWSLETTER

OCTOBER MEETING

PowerPC Technology

DATE: THURSDAY, OCTOBER 27, 1994

PLACE: Institute of Advanced Manufacturing Sciences (IAMS)

TIME : 5:30 (Social Time)

6:00 (Dinner)

7:00 (Program)

8:00 (Adjourn)

COST: \$7.00 Members

3.00 Students

9.00 Non-Members

Reservations are required for dinner only!

Please call Dee Scott at

385-9446 by NOON, Wed. Oct. 26th

ABOUT THE PRESENTATION

The PowerPC is one of the countless emerging technologies whose value is currently under scrutiny. With technology evolving at an increasingly rapid pace, it can be difficult to distinguish valuable technology from marketing hype. Critics have described PowerPC technology as everything from the computer architecture of the future to an attempt by IBM, Apple and Motorola to gain market share from Intel. But what exactly is the PowerPC and how does it impact industry?

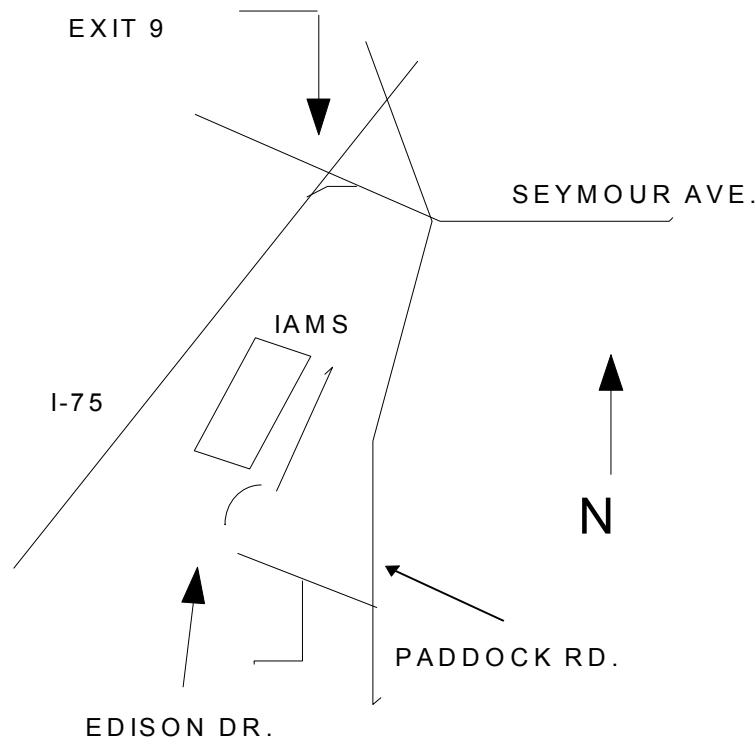
The PowerPC is a fast, low-cost microprocessor that is capable of running applications designed for a variety of operating environments, including Unix, DOS, Windows and Apple Macintosh. Mike Hitchcock, IBM RISC System (RS)/6000 team leader for Southwest Ohio and Kentucky, has developed

an informative presentation on PowerPC technology. He provides an overview of the technology, the solutions it provides and his vision of how the PowerPC marketplace is evolving. Mike also answers the following questions:

- Who are the potential users of PowerPC products?
- What differentiates the PowerPC from other microprocessors?
- Who are the players in the PowerPC marketplace?
- What is the commodity trend in the computer industry and how is it impacting vendors and end-users?

Mike joined IBM in 1978 as part of the Boca Raton Laboratory and is one of eleven certified RS/6000 marketing specialists. He currently leads a team of open systems specialists and is considered as one of IBM's leaders in the area of open systems.

MAP TO IAMS



CHAIRMAN'S MESSAGE

by Jim Everly

Last month's tour of the Dayton Power & Light Energy Resource Center was arranged by Mr. Jack Beckmeyer of the Cincinnati Section. A sincere thanks goes out to Jack for coordinating the tour. This month's program "The PowerPC" will feature Mr. Mike Hitchcock, IBM RISC System (RS)/6000 team leader.

I have included the program calendar for meetings at IAMS in the newsletter. The topics for each meeting are not listed but will be included in next month's newsletter. Please note that the November and December meetings have been combined into a single meeting during the first week in December to avoid conflict with Thanksgiving and Christmas holidays.

The agenda for the September meeting of the Executive Committee is also included in this newsletter. The committee voted to support one-half of the price of IEEE student membership for up to thirty (30) new members from the freshman class. Twenty (20) half-priced student memberships will go to UC and ten (10) will go to Cincinnati State (formerly CTC).

As noted in earlier Newsletters the Executive Committee is aggressively seeking a person to fill the position of Program Chairman. A description of the position is available in this month's Newsletter. I expect to get a lot of telephone calls from volunteers. You may use 777-7129 and leave a message on my answering machine if I am not available when you call.

The Fall Quarter meeting of the Executive Committee will be on Thursday, October 20, 1994. If you have comments or would like to add a topic to the agenda, please give me a call. The telephone numbers of the Section Officers are located on the back of the Newsletter.

Who Invented Television?

by

R. J. Reiman, Historian

Inventors anticipated the public demand for television before the advent of radio broadcasting. So many participated in the development that it is impossible to answer the question "Who invented television?", but a few were so important as to be recognized as pioneers.

Paul Nipkow proposed the first practical mechanical scanner in Germany in 1884. The scanner was a rotating disk with holes arranged in a spiral around its edge. Light passing through the holes as the disk rotated produced a rectangular scanning pattern or raster which could be used to either generate an electrical signal from the scene for transmitting or to produce an image from the signal at the receiver. As the disk rotated, the image was scanned by the perforations in the disk, and light from different portions of it passed to a photocell. The number of scanned lines was equal to the number of perforations and each rotation of the disk produced a television frame. In the receiver, the brightness of the light source would be varied by the signal voltage. Again, the light passed through a synchronously rotating perforated disk and formed a raster on the projection screen. Mechanical viewers had the serious limitation of resolution and brightness.

John Logie Baird, a Scottish engineer-inventor, successfully promoted a television system based on the Nipkow principle, received backing and sold transmitters and receivers. Laboratories in the United States and Great Britain worked to develop an all-electronic system. In Britain, the Electric and Musical Industries, Ltd., provided a system along with Baird's, and these were experimentally used to broadcast television programs by the BBC in November 1936. The EMI system won overwhelmingly. An American inventor, Charles Francis Jenkins, followed with a rotating ring whose thickness varied and increased around its circumference, forcing a rotating prism. By using two rings overlapping at right

angles, a beam could be made to scan both horizontally and vertically, which unfortunately produced small, dim and fuzzy images. Jenkins' system, like Baird's, failed on the basis of poor quality.

AT&T first demonstrated a television system developed by one of Bell Lab's scientists, Herbert Ives, again based on the Nipkow disks. GE also demonstrated a mechanical system developed by Ernst Alexanderson. David Sarnoff, however, would turn to research for a successful electronic system.

In the 1920's, Alan A. Campbell-Swinton, a prominent electrical engineer in London, proposed a system that would use CRT's displaying the picture at the receiver, with electromagnetic scanning to form the raster. His transmitter tube, using a chamber filled with gas which could conduct electrons, was not suitable. Credit for the first practical TV signal-generator of pickup must be shared by Vladimir K. Zworykin and Philo T. Farnsworth, who invented the iconoscope and the image dissector respectively. Successful electronic TV would follow.

IEEE NEWS

NEW IEEE-USA BOOKLET EXPOSES FLAWS IN U.S. PENSION SYSTEM

WASHINGTON, Aug. 3 -- A new publication by the United States Activities division of The IEEE describes several major flaws in the U.S. voluntary private pension system. *Six Threats to Your Retirement*, the latest edition of IEEE-USA's Professional Guidelines series, seeks to educate Institute members about important pension policy issues and involve them in IEEE-USA's continuing efforts to promote pension reform legislation.

In addition to presenting an overview of the U.S. private pension system, the booklet outlines the following threats to retirement security: limited coverage and failure to vest; integration of private benefits with Social Security; lack of portability from defined benefit plans; underfunded and overfunded plan terminations; early retirement; and insurance company insolvencies.

IEEE-USA will distribute the publication to Members of Congress and other national groups. Institute members and others can obtain a copy by contacting Marilyn Sumpter of IEEE-USA at 202-785-0017 (phone), 202-785-0835 (fax), or [ieeusa @ ieee.org](mailto:ieeusa@ieee.org) (e-mail).

IEEE NAMES KENT EKBERG ELECTRONICS PRODUCT DIRECTOR

PISCATAWAY, N.J., Sept. 8 -- Kent F. Ekberg has been named Director of Electronic Products at the IEEE, reporting to Phyllis Hall, staff executive for Publications.

In his new position Mr. Ekberg will manage the creation of an electronic data repository of digital files for the IEEE's publications and the creation of new electronic products. The IEEE plans to have all its publications, dating back to 1988, in an electronic format. Mr. Ekberg is also responsible for managing the operations of the IEEE Library, the Abstract and Index Group, Ask *IEEE -- the IEEE's comprehensive document-delivery service and current CD-ROM products.

Before joining the IEEE, Mr. Ekberg was founder and president of Tiburon Associates, a multimedia consulting firm. He also has held management positions at Publish magazine, Pioneer Communications of America, Grumman Data Systems and Sony Corporation. He received a B.A. in English from Hofstra University and an

M.A. in English from New York University, where he was a Ph.D. candidate. Also, Mr. Ekberg holds an Advanced Professional Certificate in Strategic Planning (post-M.B.A.) from New York University.

IEEE VIDEOCONFERENCE DEMONSTRATES HOW TO MAXIMIZE USER PRODUCTIVITY THROUGH INFORMATION INTEGRATION

PISCATAWAY, N.J., Sept. 19 -- "Maximizing Productivity: Information Integration for User Productivity" is the theme of the October 19 videoconference sponsored by the IEEE. The videoconference will discuss method, tools and emerging standards needed to gather information for planning and decision making from the many data resources currently available through electronic communication.

This is the first IEEE videoconference where participants can ask questions via e-mail. A special e-mail address will be displayed during the final hour for communication with the presenters.

The videoconference is designed to benefit electrical engineers, computer scientists, software professionals, system managers, configuration managers, researchers, industry CEO's and network specialists. The learning objectives of the videoconference are:

- How to manage data and information for manufacturing and planning.
- What tools are available today to access data.
- How the systems are evolving.
- What will be available in the future as the information highway becomes populated with resources and services.

The lead presenter at the videoconference will be Gio Wiederhold, professor of Computer Science and Medicine at Stanford University. Dr. Wiederhold recently was program manager, Knowledge-based Systems for Defense Advanced Research Projects Agency, and the Software and Intelligent Systems Technology Office. Other presenters are Stephen Cross, director of Carnegie Mellon University Information Technology Center, and Charles Channell, deputy area manager, and Carl Friedlander, vice president and chief scientist, both of ISX Corporation.

The videoconference will be broadcast from noon to 2 p.m. EDT through an interactive network using one-way video and two-way audio, plus a one hour e-mail access from 2 p.m. to 3 p.m.

The cost is \$1,800 for a corporate site and \$850 for a university site. Per-person rates are also available as are special prices for corporate networks and educational consortiums. Information about registration, viewing sites and taped copies can be obtained from the IEEE Continuing Education Department: Dr. Robert Kahrman, 908-562-5491 or Carolyn Yankoski, 908-562-5493

HELP WANTED

The Cincinnati Section of the IEEE is openly advertising for the Executive Committee position of Program Chairman. The following is a brief description of the duties and responsibilities of the position:

1. Coordinate monthly programs of the Cincinnati Section with the Section Chairman and the IAMS facility.
2. Coordinate with catering service by providing menu selection for the monthly dinner meeting, and an estimate of the number of people attending.

3. In a timely manner, provide monthly program and speaker information to the Newsletter Editor.
4. Notify IAMS Facility Coordinator of equipment needed by the guest speaker, such as projector, blackboard, etc.
5. Represent the Cincinnati Section as the "speaker's host" on the night of the section meeting. This will include introductions during the social hour and a formal introduction at the start of the section meeting.

If you are interested in the position, please contact Jim Everly (phone number on the back of this Newsletter).

Do You Do Windows?
Mark Your Calendar!!

Microsoft has agreed to make a presentation on Windows 95 (a.k.a. Chicago), the successor to Windows 3.1 for our January meeting. This new product will be introduced early in 1995, so this will be a chance for you to get a sneak preview!

THE IEEE UC OCAS STUDENT CHAPTER STARTS NEW IEEE BBS

A new bbs software called Excalibur is being used by OCAS students. Features include multi-tasking, full-windows interface, use of the mouse for menu choices and fast algorithmic based graphics. On your first call you will be asked to download the client software. After installing the software, you simply call back and log in as a new user.

The IEEE OCAS bbs will be a meeting ground for OCAS students and professional engineers. The bbs is divided into forums that pertain to many different aspects of IEEE and University activities. Some forums now include news and information, a resume exchange, MS-DOS utilities and shareware.

Call the IEEE OCAS BBS twenty-four hours a day at 513-556-4880. For help or information call Chris Burkey at 221-1325.

University of Cincinnati
OMI College of Applied Science
Student Branch Officers
1994-1995

OFFICE	NAME	TELEPHONE
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Chairman	John Donaldson	729-3782
Vice Chairman	Dave Buffington	825-6750
Treasurer	Steve Ertel	752-2345
Recording Secretary	Chris Burkey	221-1325
Corresponding Secretary	Jeff Weaver	422-4374
Member-at-Large	Chris Boylan	474-1361
Member-at-Large	Cleve Cornelius	522-5493

Dee Scott (call for meeting reservations)	385-9446
Jim Everly - Chairman	777-7129 (Home)
	556-4224 (Fax)
	556-4241 (Office)
Steve Olenick - Vice Chairman	573-6555
Orest Melnyk - Treasurer	565-2549
Mark Reineck - Secretary	753-6290
Bob Morrison - Editor	287-3697 (Office); 287-3698 (Fax)

OCTOBER 1994

IEEE CINCINNATI SECTION NEWSLETTER



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Maineville, Ohio 45039**

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